

Abstract

Sub
a9

The invention relates to a semiconductor laser chip, especially temperature probe(s) and temperature regulator(s) (1 or 15) related to chip technology. The invention also relates to the direct arrangement of one or more temperature probes (1) on or in the laser chip (4). Said temperature probe(s) enable(s) a precisely and/or locally solved measurement of the operating temperature of the laser. In addition, a fine equalization of temperature occurs with higher precision adjustment of temperature and/or position selectivity of temperature. To this end, one or more temperature probes (1) is/are placed and fastened directly onto the laser chip (4) or in a hole of the laser chip by means of a welding; especially with Nd-YAG-laser light or light with similar characteristics. The fine equalization of temperature is carried out, for example, by peltier elements, whereby the components of the peltier elements are mounted directly onto the laser chip (4) by means of Nd-YAG-laser light welding. In addition, the measurement of the temperature of the individual lasers (5) is carried out by the measurement of the temperature dependence of the bulk resistors (11). The invention also relates to a cascaded arrangement of thermoelements and peltier elements on a laser chip.

09529700-041800